

DATE: 3/31/2010

INVITATION TO BID
THIS IS NOT AN ORDER

BID NO.: 50-00097273
SOLICITATION #B2010000082

JEFFERSON PARISH
PURCHASING DEPARTMENT
P.O. BOX 9
GRETN, LA. 70054-0009
504-364-2678

Page: 1

VENDOR:

BUYER: S. Vasquez

BIDS WILL BE RECEIVED IN THE PURCHASING DEPARTMENT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETN, LA 70053 UNTIL 2:00 PM, 5/04/2010 AND PUBLICLY OPENED UPON COMPLETION OF ADMINISTRATIVE TASKS.

LATE BIDS WILL NOT BE ACCEPTED

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES DISQUALIFY BID.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. The provisions do not apply to public works projects

Questions on this bid are to be faxed to (504) 364-2693 no later than FIVE (5) working days prior to bid opening. Bid numbers should be mentioned in all requests.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet or exceed specifications.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection.

If the bid exceeds \$20,000.00 and if someone other than a corporate officer signs for the Bidder/Contractor, a copy of a corporate resolution or other signature authorization shall be required for submission of bid. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the bid unless bidder has complied with LSA-R.S. 38:2212(A)(1)(c) or LSA-R.S. 38:2212 (O).

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE.

Preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitor outside the state. "LSA-R.S.38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

Visit our website at WWW.JEFFPARISH.NET/BIDS

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit measure specified and unless otherwise specified, shall be exclusive of state and Parish taxes.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A117.1-1961).

E. RESPONSE TO INVITATION: If your company is unable to bid on this request, please state your reason on bid form, and return to this office before bid opening date. Failure to do so may result in the removal of your company from Jefferson Parish's vendors list.

F. POSTING OF BIDS: Non-Advertised bids will be posted on bulletin board in Suite 4400, Jefferson Parish General Government Building, Gretna, LA, for a period of Five (5) working days after opening date.

Advertised bids will be tabulated and a copy forwarded to each responsive bidder.

IN ACCORDANCE WITH RECENT STATE LEGISLATION JEFFERSON PARISH IS NOW OFFERING ELECTRONIC PROCUREMENT TO ALL VENDORS

JEFFPro is the current Electronic Procurement System being used by the Parish. This system allows vendors the convenience of entering and submitting their pricing online. This is a secure site and no one has access to bid information.

Please follow the Purchasing Department link at purchasing.jeffparish.net to register and review Jefferson Parish solicitations.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 dated 12/09/09. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053.

ADDITIONAL REQUIREMENTS FOR THIS BID

**PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE
CORRESPONDING INSTRUCTIONS BELOW.**

1,4,5,7,8,9,10,14

1. All bidders are invited to attend the pre-bid conference. Failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. This conference is held to allow questions to be answered and inspect the site with owner's representative, etc. Failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification (with no additional cost to the owner).

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

2. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project.
3. **A Louisiana State Contractor's License may be required in accordance with LSA-R.S. 37:2150 et seq. If providing information on the internet (JEFFPro) please enter license number in the vendor comment section of the bid form.**
4. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
5. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.
6. All awards in excess of \$5,000.00 for the construction, alteration, or repair of any public works will be reduced to a formal contract which shall be recorded at the contractor's expense. A price list of recordation costs may be obtained from the Clerk of Court and Ex-officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 reduced to formal contract will require a performance bond.
7. A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. Performance bond shall be supplied at the signing of the contract.
8. Please indicate if you have insurance: YES _____ NO _____
Successful bidder will be required to furnish proof of insurance to this office.
Successful bidder will be required to furnish Federal I.D. Number.
9. Minimum insurance requirements for this bid are as indicated on the attached sheet.
10. Each bid must be accompanied by a cashier's check, certified check, money order, or surety bid bond in the amount of 5% of the bid, including all alternates.
11. Affidavit required is to be submitted within 10 working days of the bid opening to the Purchasing Department on all solicitations for construction, alteration or demolition of public building or project. (LSA-RS 38:2224)
12. This is a requirements contract to be provided on an as needed basis.
13. In the event that the successful bidder cannot furnish a specific item or material and labor in the required time, JEFFERSON PARISH may purchase on an emergency basis from the next lowest bidder, or available source, until such time as the successful bidder has notified the PARISH in writing that his stock or labor capability has been replenished. The difference in price will be charged against the successful bidder of this contract, and evidence of purchases and price will be provided.
14. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be disqualified if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.

DATE: 3/31/2010

BID NO.: 50-00097273

Page 4

BID FORM

Non Public Works

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES _____

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) _____

FIRM NAME: _____

ADDRESS: _____

CITY, STATE: _____ ZIP: _____

TELEPHONE: () _____ FAX: () _____

EMAIL ADDRESS: _____

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES _____ NO _____

MAXIMUM ESCALATION PERCENTAGE REQUESTED _____ %

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF _____.

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed, for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

TOTAL PRICE OF ALL BID ITEMS: \$ _____

AUTHORIZED

SIGNATURE: _____

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00097273

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	1	ONLY	<p>0010 - PROVIDE A 2000 KW DIESEL FUELED EMERGENCY GENERATOR ON TRANSPORTABLE TRAILER, TO INCLUDE TRAINING, AS PER ATTACHED SPECIFICATIONS.</p> <p>*****</p> <p>A PRE-BID CONFERENCE will be held at 9:30 a.m. on TUESDAY, APRIL 20, 2010, in the PURCHASING DEPARTMENT, Suite 4400 Jefferson Parish General Government Bldg 200 Derbigny Street, Gretna, LA 70053</p> <p>*****</p> <p>A LOUISIANA STATE DEALER'S LICENSE MAY BE REQUIRED IN ACCORDANCE WITH LA RS 32:1254 ET SEQ. IF APPLICABLE, PROVIDE LOUISIANA DEALER'S LICENSE NUMBER WITH YOUR BID.</p> <p>WARRANTY SERVICE REPAIRS MUST BE INITIATED WITHIN TWO (2) HOURS OF NOTIFICATION.</p> <p>WARRANTY: _____</p> <p>MANUALS: 2 PARTS, 2 SERVICE MANUALS, IF MANUFACTURER STILL PROVIDES. IF NOT MANUALS, CD WILL BE ACCEPTED.</p> <p>SAFETY: MUST MEET OR EXCEED ALL FEDERAL AND STATE SAFETY STANDARDS.</p>		
2	1	ONLY	<p>0020 - ALTERNATE BID #1 MAINTENANCE SERVICE CONTRACT</p> <p>**THIS ITEM MAY OR MAY NOT BE AWARDED**</p> <p>PROVIDE MAINTENANCE, TESTING AND SERVICE CONTRACT: BEGINNING AT SUBSTANTIAL COMPLETION, PROVIDE A FIVE (5) YEAR FULL MAINTENANCE, TESTING AND SERVICE AGREEMENT. ALL MAINTENANCE, TESTING AND SERVICE SHALL BE PERFORMED BY SKILLED EMPLOYEES OF THE MANUFACTURER'S DESIGNATED SERVICE ORGANIZATION. ANY WORK OR TESTING REQUIRING TEMPORARY LOSS OF POWER TO THE FACILITY SHALL BE PERFORMED AFTER NORMAL BUSINESS HOURS (6:00AM-6:00PM). PROVIDE WRITTEN REPORTS OF ALL MAINTENANCE, TESTING AND SERVICE PERFORMED. SEE ATTACHED SPECIFICATIONS.</p>		

INSURANCE REQUIREMENTS

All insurance requirements shall conform to Jefferson Parish Resolution No. 113646 or No. 113647 dated 12/09/09.

The contractor shall not commence work under this contract until he has obtained all insurance and complied with the requirements of the specifications and Resolution No. 113646 or No. 113647.

WORKER'S COMPENSATION INSURANCE

As required by Louisiana State Statute, exception; Employer's Liability, Section B shall be \$1,000,000 per occurrence when Work is to be over water and involves maritime exposures to cover all employees not covered under the State Worker's Compensation Act, otherwise this limit shall be no less than \$500,000 per occurrence.

COMMERCIAL GENERAL LIABILITY

Shall provide limits not less than the following: \$1,000,000.00 Combined Single Limit per Occurrence for bodily injury and property damage.

COMPREHENSIVE AUTOMOBILE LIABILITY

Bodily injury liability \$1,000,000.00 each person; \$1,000,000.00 each occurrence.
Property Damage Liability \$1,000,000.00 each occurrence.

DEDUCTIBLES

No insurance required shall include a deductible not greater than \$10,000.00. The cost of the deductible be borne by the contractor.

UMBRELLA LIABILITY COVERAGE

An umbrella policy or excess may be used to meet minimum requirements.

CONSTRUCTION AND RENOVATION PROJECTS REQUIRE THE FOLLOWING:

OWNER'S PROTECTIVE LIABILITY

To be for the same limits of liability for bodily injury and property damage liability established for commercial general liability.

BUILDER'S RISK INSURANCE

The contractor shall maintain Builder's Risk Insurance at his own expense to insure both the owner (Parish of Jefferson) and contractor as their interest may appear.

Section 1.0 – Pre-Bid Conference:

A Pre-Bid Conference and inspection of the site shall be held at **9:30 a.m.** on **TUESDAY, APRIL 20, 2010**, in the Purchasing Department, located in Suite 4400, Jefferson Parish General Government Bldg., 200 Derbigny Street, Gretna, LA 70053.

All bidders are invited to attend the Pre-Bid Conference. Failure to attend the Pre-Bid Conference shall not relieve the bidder of responsibility for information discussed at the conference. This conference is held to allow questions to be answered and to inspect the site with the owner's representative, etc.

The Pre-Bid Conference and inspection does not relieve the successful bidder from necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specifications without cost to the owner.

Section 2.0 – Scope:

We extend this proposal to cover the furnishing of labor, materials, and equipment necessary to provide one (1) 2000 KW diesel fueled emergency generator on a transportable trailer at the Jefferson Parish Government Complex, located at 200 Derbigny Street, Gretna, LA, for the Department of General Services. Training **MUST** be included as per specifications.

Section 3.0 – Quantities/Inspection:

Bidders must inspect the site and perform their own measurements in order to determine the proper quantity of materials required to complete the job.

Contact George Folse, Assistant Director, at 504.364.2675 for appointments between the hours of 7:00 a.m. and 3:00 p.m., Monday through Friday.

Section 4.0 – Bid Specifications:

We extend this proposal to cover the furnishing of labor, materials, and equipment necessary to provide one (1) 2000 KW diesel fueled emergency generator on a transportable trailer at the Jefferson Parish Government Complex, located at 200 Derbigny Street, Gretna, LA, for the Department of General Services. Training **MUST** be included as per specifications.

PACKAGED ENGINE GENERATOR

ENGINE

EPA approved Tier 2 3516C Caterpillar Engine
 Heavy Duty Air Cleaner with service indicator
 60-amp charging Alternator
 Fuel Filters-primary and duplex secondary with integral and change-over valve
 Lubricating oil system including oil drain lines routed to engine rail
 Jacket water heater
 Fuel cooling and primary pump
 Electronic ADEM A3 (the name of the engine control module) controls
 24 volt starting motors with battery rack and cables

GENERATOR

SR-4B brushless, permanent magnet excited, three phase with Caterpillar digital voltage regulator (CDVR), space heaters, 6-lead design, Class H insulation operating at Class F temperature for extended life, winding temperature detectors and anti-condensation space heaters (120/240V 1.2kw)

CONTAINERIZED MODULE

40 ft. ISO (intelligent switchgear organization) high cube container, CSC (Container safety convention) certified
 Three-axle, 40 ft. container chassis
 Seven (7) sound attenuated air intake louvers, and lockable personnel doors with panic releases
 Side bus bar access door, external access load connection bus bars
 Shore power connection via distribution block connections for jacket water heater, battery charger, space heaters, and generator condense heaters
 Standard lighting 3 AC/4DC, one (1) single duplex service receptacle, two (2) external break-glass emergency stop push buttons
 1,250 Gallon Fuel Tank, UL listed, double wall, nine (9) hour runtime @ prime rating (Full Load)
 Sound attenuated 75 db (A) @ 50 ft.
 Spill containment 110% of all engine fluids

Four (4) oversized maintenance free batteries, battery rack, and 20-amp battery charger
 Hospital grade internally insulated, rectangular exhaust silencer with vertical discharge
 Vibration isolators, corrosion resistant hardware and hinges
 Interior walls and ceiling insulated with 100mm of acoustic paneling
 Floor of container insulated with acoustic glass and covered with galvanized steel

COOLING

Standard cooling provides 43C ambient capability (60 Hz) at prime + 10% rating
Vertically mounted, separate ATAAC (air to air after cooler) and JW (jacket water) cores with vertical air discharge

GENERATOR PARALLELING CONTROL

Custom switchgear control with EMCP (engine monitor control panel) 3.3 genset mounted controller and wall mounted paralleling controls

Automatic start/stop with cool down timer

Protections: 25, 27/59, 40, 32, 81 O/U (over under)

Utility multi-function relay protections 25 27/59 32 47 50/51 62 67 81 O/U (over under)

UMR (utility multifunction relay) is IEEE (institute of electrical and electronic engineers) 1547-2003 compliant in most applications

Reverse compatibility module provided for interface to legacy power modules

Touch screen controls and event log

Multi-mode operation (island, multi-island, and utility parallel), load sharing (multi-unit only)

Touch screen display (status and alarms)

Metering display, voltage, current, frequency, power factor, KW,(kilowatts) WHM, (watt hour meter)KVAR,(kilovolt ampere reactance) and synchroscope.

QUALITY

Standard genset and package factory tested

UL,(underwriters laboratory) NEMA, (national electrical manufactures association) ISO (intelligent switchgear operation) and IEEE (institute of electrical and electronic engineers) Standards

O&M Manuals

TRAINING - The following MUST be included in this package;

Provide a minimum of 3 (three) full work days, 24 (twenty-four) hours for start up and training. Instructor must be a certified training instructor on the provided equipment.

Provide 5 (five) Year Limited Extended Product Warranty

The 5 yr. extended warranty will begin upon the date the generator is received by Jefferson Parish.

GENERAL REQUIREMENTS

1.1 SUMMARY

- A. This Section includes packaged engine-generator sets for standby power supply with the following features:
 - 1. Diesel fueled engine.
 - 2. Unit-mounted cooling system.
 - 3. Unit-mounted control and monitoring.
 - 4. Performance requirements for sensitive loads.
 - 5. Outdoor enclosure.
 - 6. Mounted unit on trailer for relocation as needed by owner.

1.2 SUBMITTALS

- A. Product Data: For each type of packaged engine generator indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories. In addition, include the following:
 - 1. Thermal damage curve for generator.
 - 2. Time-current characteristic curves for generator protective device.
- B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 1. Dimensioned outline plan and elevation drawings of engine-generator set and other components specified.
 - 2. Wiring Diagrams: Power, signal, and control wiring.
- C. Qualification Data: For manufacturer.
- D. Source quality-control test reports.
 - 1. Certified summary of prototype-unit test report.
 - 2. Certified Test Reports: For components and accessories that are equivalent, but not identical, to those tested on prototype unit.
 - 3. Certified Summary of Performance Tests: Certify compliance with specified requirement to meet performance criteria for sensitive loads.
 - 4. Report of factory test on units to be shipped for this Project, showing evidence of compliance with specified requirements.
 - 5. Report of sound generation.
 - 6. Report of exhaust emissions showing compliance with applicable regulations.

- E. Field quality-control test reports.
- F. Operation and Maintenance Data: For packaged engine generators to include in emergency, operation, and maintenance manuals. Include the following:
 - 1. List of tools and replacement items recommended being stored at Project for ready access. Include part and drawing numbers, current unit prices, and source of supply.
 - 2. QUALITY ASSURANCE
- G. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
 - 1. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.
- H. Manufacturer Qualifications: A qualified manufacturer. Maintain, within 200 miles of Project site, a service center capable of providing training, parts, and emergency maintenance repairs.
- I. Source Limitations: Obtain packaged generator sets and auxiliary components through one source from a single manufacturer.
- J. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- K. Comply with ASME B15.1.
- L. Comply with NFPA 37.
- M. Comply with NFPA 70.
- N. Comply with NFPA 110 requirements for Level 2 emergency power supply system.
- O. Comply with UL 2200.
- P. Engine Exhaust Emissions: Comply with applicable state and local government requirements.

1.3 PROJECT CONDITIONS

- A. Testing-Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless

permitted under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify Owner no fewer than seven days in advance of proposed interruption of electrical service.
 2. Do not proceed with interruption of electrical service without Owner's written permission.
- B. Environmental Conditions: Engine-generator system shall withstand the following environmental conditions without mechanical or electrical damage or degradation of performance capability:
1. Ambient Temperature: Minus 15 to plus 40 deg C.
 2. Altitude: Sea level.

1.4 MAINTENANCE SERVICE- Alternate Bid Number 1

- A. Provide Maintenance, Testing and Service Contract: Beginning at Substantial Completion, provide a five year full maintenance, testing, and service agreement. All maintenance, testing and service shall be performed by skilled employees of the manufacturer's designated service organization. Any work or testing requiring temporary loss of power to the facility shall be performed after normal business hours (6AM-6PM). Provide written reports of all maintenance, testing, and service performed. Contract shall include the following:
1. As part of acceptance testing, in addition to the test recommended by the manufacturer or otherwise specified herein, include an initial load bank test to verify that generators can produce full rated output. Provide and connect a portable load bank for testing.
 2. Include an annual load bank test (portable load bank to be provided by manufacturer's designated service organization).
 3. Include quarterly exercising to check for proper starting, load transfer, and running under building load. Test after normal business hours.
 4. Include routine preventive maintenance as recommended by manufacturer. Replace belts, hoses, batteries, filters, etc. due to wear or malfunction in accordance with the manufacturer's operational limits and component specifications.
 5. Include and provide service as required for proper operation. Provide parts and supplies identical to those used in the manufacture and installation of original equipment.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide the product indicated on Drawings or a comparable product by one of the following. If a comparable product, other than the model specified on the drawings, is proposed, submit documentation in accordance with Division 1 Sections "Submittals" and "Product Requirements". In addition, submit calculations that clearly indicate that the proposed generator will be capable of meeting the load requirements. Contractor shall be responsible for obtaining load information to perform the load analysis. Any costs directly associated with the proposed substitution, including, but not limited to, administrative costs, engineering fees, material, labor, tools, or equipment, shall be born directly by the Contractor. The Contractor shall be responsible for coordinating the change with all other trades and work, including structural work.

1. Caterpillar; Engine Div.
2. Onan/Cummins Power Generation; Industrial Business Group.

2.2 ENGINE-GENERATOR SET

- A. Factory-assembled and -tested, engine-generator set.
- B. Capacities and Characteristics:
1. Power Output Ratings: Nominal ratings as indicated, with capacity as required to operate as a unit as evidenced by records of prototype testing.
 2. Output Connections: Three-phase, four wire.
 3. Nameplates: For each major system component to identify manufacturer's name and address, and model and serial number of component.
- C. Generator-Set Performance for Sensitive Loads:
1. Over sizing generator compared with the rated power output of the engine is permissible to meet specified performance.
 - a. Nameplate Data for Oversized Generator: Show ratings required by the Contract Documents rather than ratings that would normally be applied to generator size installed.

2. Steady-State Voltage Operational Bandwidth: 1 percent of rated output voltage from no load to full load.
3. Transient Voltage Performance: Not more than 10 percent variation for 50 percent step-load increase or decrease. Voltage shall recover and remain within the steady-state operating band within 0.5 second.
4. Steady-State Frequency Operational Bandwidth: Plus or minus 0.5 percent of rated frequency from no load to full load.
5. Steady-State Frequency Stability: When system is operating at any constant load within the rated load, there shall be no random speed variations outside the steady-state operational band and no hunting or surging of speed.
6. Transient Frequency Performance: Less than 2-Hz variation for 50 percent step-load increase or decrease. Frequency shall recover and remain within the steady-state operating band within three seconds.
7. Output Waveform: At no load, harmonic content measured line to neutral shall not exceed 2 percent total with no slot ripple. Telephone influence factor, determined according to NEMA MG 1, shall not exceed 50 percent.
8. Sustained Short-Circuit Current: For a 3-phase, bolted short circuit at system output terminals, system shall supply a minimum of 300 percent of rated full-load current for not less than 10 seconds and then clear the fault automatically, without damage to winding insulation or other generator system components.
9. Excitation System: Performance shall be unaffected by voltage distortion caused by nonlinear load.
 - a. Provide permanent magnet excitation for power source to voltage regulator.

2.3 ENGINE

- A. Fuel: Diesel.
- B. Rated Engine Speed: As Per Manufacturer's Specification.
- C. Maximum Piston Speed for Four-Cycle Engines: As Per Manufacturer's Specification.
- D. Fuel System:
 1. The engine shall be designed to run on diesel fuel only. Consumption of fuel shall be as per manufacturer's specifications.

2. The engine shall be provided with a factory supplied flexible connector and a fuel strainer.
- E. Lubrication System: The following items are mounted on engine or skid:
1. Filter and Strainer: Rated to remove 90 percent of particles 5 micrometers and smaller while passing full flow.
 2. Thermostatic Control Valve: Control flow in system to maintain optimum oil temperature. Unit shall be capable of full flow and is designed to be fail-safe.
 3. Crankcase Drain: Arranged for complete gravity drainage to an easily removable container with no disassembly and without use of pumps, siphons, special tools, or appliances.
- F. Coolant Jacket Heater: Electric-immersion type, factory installed in coolant jacket system.
- G. Governor: Adjustable isochronous, with speed sensing.
- H. Cooling System: Closed loop, liquid cooled, with radiator factory mounted on engine-generator-set mounting frame and integral engine-driven coolant pump.
1. Coolant: Solution of 50 percent ethylene-glycol-based antifreeze and 50 percent water, with anticorrosion additives as recommended by engine manufacturer.
 2. Size of Radiator: Adequate to contain expansion of total system coolant from cold start to 110 percent load condition.
 3. Temperature Control: Self-contained, thermostatic-control valve modulates coolant flow automatically to maintain optimum constant coolant temperature as recommended by engine manufacturer.
 4. Coolant Hose: Flexible assembly with inside surface of nonporous rubber and outer covering of aging-, ultraviolet-, and abrasion-resistant fabric.
 - a. Rating: 50-psig maximum working pressure, or as per manufacturer's specifications with coolant at 180 deg F, and non-collapsible under vacuum.
 - b. End Fittings: Flanges or steel pipe nipples with clamps to suit piping and equipment connections.
- I. Muffler/Silencer: Critical type, sized as recommended by engine manufacturer and selected with exhaust piping system to not exceed engine manufacturer's engine backpressure requirements.
1. Minimum sound attenuation of 25 dB at 500 Hz.

2. Sound level measured at a distance of 23 feet from exhaust discharge in any direction, after installation is complete shall be 75 dBA or less.
 3. Exhaust pipe connection to engine shall be flexible.
- J. Air-Intake Filter: Heavy-duty, engine-mounted air cleaner with replaceable dry-filter element and "blocked filter" indicator.
- K. Starting System: 24-V electric, with negative ground.
1. Components: Sized so they will not be damaged during a full engine-cranking cycle with ambient temperature at maximum specified in Part 1 "Project Conditions" Article.
 2. Cranking Motor: Heavy-duty unit that automatically engages and releases from engine flywheel without binding.
 3. Cranking Cycle: 60 seconds.
 4. Battery: Adequate capacity within ambient temperature range specified in Part 1 "Project Conditions" Article to provide specified cranking cycle at least three times without recharging.
 5. Battery Cable: Size as recommended by engine manufacturer for cable length indicated. Include required interconnecting conductors and connection accessories.
 6. Battery-Charging Alternator: Factory mounted on engine with solid-state voltage regulation and 35-A minimum continuous rating.
 7. Battery Charger: Current-limiting, automatic-equalizing and float-charging type. Unit shall comply with UL 1236 and include the following features:
 - a. Operation: Equalizing-charging rate of 10 A shall be initiated automatically after battery has lost charge until an adjustable equalizing voltage is achieved at battery terminals. Unit shall then be automatically switched to a lower float-charging mode and shall continue to operate in that mode until battery is discharged again.
 - b. Automatic Temperature Compensation: Adjust float and equalize voltages for variations in ambient temperature from minus 40 deg C to plus 60 deg C to prevent overcharging at high temperatures and undercharging at low temperatures.
 - c. Automatic Voltage Regulation: Maintain constant output voltage regardless of input voltage variations up to plus or minus 10 percent.
 - d. Ammeter and Voltmeter: Flush mounted in door. Meters shall indicate charging rates.
 - e. Safety Functions: Sense abnormally low battery voltage and close contacts providing low battery voltage indication on control and monitoring panel. Sense high battery voltage and loss of ac input or dc output of battery charger. Either

- condition shall close contacts that provide a battery-charger malfunction indication at system control and monitoring panel.
- f. Enclosure and Mounting: NEMA 250, Type 1, wall-mounted cabinet.

2.4 CONTROL AND MONITORING

- A. Automatic Starting System Sequence of Operation: When mode-selector switch on the control and monitoring panel is in the automatic position, remote-control contacts in the automatic transfer switch initiates starting and stopping of generator set. When mode-selector switch is switched to the on position, generator set starts. The off position of same switch initiates generator-set shutdown. When generator set is running, specified system or equipment failures or derangements automatically shut down generator set and initiate alarms. Operation of a remote emergency-stop switch also shuts down generator set.
- B. Configuration: Operating and safety indications, protective devices, basic system controls, and engine gages shall be grouped in a common control and monitoring panel mounted on the generator set. Mounting method shall isolate the control panel from generator-set vibration.
- C. Indicating and Protective Devices and Controls: As required by NFPA 110 for Level 2 system, and the following:
 - 1. AC voltmeter.
 - 2. AC ammeter.
 - 3. AC frequency meter.
 - 4. DC voltmeter (alternator battery charging).
 - 5. Engine-coolant temperature gage.
 - 6. Engine lubricating-oil pressure gage.
 - 7. Running-time meter.
 - 8. Ammeter-voltmeter, phase-selector switch.
 - 9. Generator-voltage adjusting rheostat.
 - 10. Generator overload.
- D. Supporting Items: Include sensors, transducers, terminals, relays, and other devices and include wiring required to support specified items. Locate sensors and other supporting items on engine or generator, unless otherwise indicated.
- E. Connection via Internet: The Control panel shall be provided with hardware and software as necessary to allow the generator set and ATS alarm and status information to be monitored remotely via an internet connection.

- F. Remote Alarm Annunciator: Comply with NFPA 110. Provide "Common Alarm" or "Check Genset" indicator to prompt users to check the Generator Control Panel for alarms that do not appear on the remote annunciator. An LED labeled with proper alarm conditions shall identify each alarm event and a common audible signal shall sound for each alarm condition. Silencing switch in face of panel shall silence signal without altering visual indication. Connect so that after an alarm is silenced, clearing of initiating condition will reactivate alarm until silencing switch is reset. Cabinet and faceplate are surface- or flush-mounting type to suit mounting conditions indicated.

2.5 GENERATOR OVERCURRENT AND FAULT PROTECTION

- A. Generator Disconnect Switch: Molded-case type, 100 percent rated.
 - 1. Rating: Matched to generator output rating.
 - 2. Shunt Trip: Connected to trip switch when signaled by generator protector or by other protective devices.
- B. Generator Protector: Microprocessor-based unit shall continuously monitor current level in each phase of generator output, integrate generator heating effect over time, and predict when thermal damage of alternator will occur. When signaled by generator protector or other generator-set protective devices, a shunt-trip device in the generator disconnect switch shall open the switch to disconnect the generator from load circuits. Protector shall perform the following functions:
 - 1. Initiates a generator overload alarm when generator has operated at an overload equivalent to 110 percent of full-rated load for 60 seconds. Indication for this alarm is integrated with other generator-set malfunction alarms.
 - 2. Under single or three-phase fault conditions, regulates generator to 300 percent of rated full-load current for up to 10 seconds.
 - 3. As over current heating effect on the generator approaches the thermal damage point of the unit, protector switches the excitation system off, opens the generator disconnect device, and shuts down the generator set.
 - 4. Senses clearing of a fault by other over current devices and controls recovery of rated voltage to avoid overshoot.

2.6 GENERATOR, EXCITER, AND VOLTAGE REGULATOR

- A. Comply with NEMA MG 1.
- B. Drive: Generator shaft shall be directly connected to engine shaft. Exciter shall be rotated integrally with generator rotor.

- C. Electrical Insulation: Class H.
- D. Stator-Winding Leads: Brought out to terminal box to permit future reconnection for other voltages if required.
- E. Construction shall prevent mechanical, electrical, and thermal damage due to vibration, over speed up to 125 percent of rating, and heat during operation at 110 percent of rated capacity.
- F. Enclosure: Drip proof.
- G. Instrument Transformers: Mounted within generator enclosure.
- H. Voltage Regulator: Solid-state type, separate from exciter, providing performance as specified.
 - 1. Adjusting rheostat on control and monitoring panel shall provide plus or minus 5 percent adjustment of output-voltage operating band.
- I. Strip Heater: Thermostatically controlled unit arranged to maintain stator windings above dew point.
- J. Windings: Two-thirds pitch stator winding and fully linked amortisseur winding.
- K. Sub transient Reactance: 12 percent, maximum.

2.7 OUTDOOR GENERATOR-SET ENCLOSURE

- A. Description: Prefabricated or pre-engineered walk-in enclosure with the following features:
 - 1. Construction: Vandal-resistant, weatherproof, sound-attenuated, aluminum or steel. Electrostatic, powder-coat finish to protect metal from rust and corrosion.
 - 2. Structural Design and Anchorage: Wind resistant up to 150 mph (sustained). Comply with ASCE 7 for wind load calculations.
 - 3. Space Heater: As required to maintain temperatures within the operating range of the equipment enclosed; thermostatically controlled and sized to prevent condensation.
 - 4. Ventilation: Louvers equipped with bird screen and filter arranged to permit air circulation while excluding exterior dust, birds, and rodents.
 - 5. Hinged Doors: With padlocking provisions.
 - 6. Thermal Insulation: Manufacturer's standard materials and thickness selected in coordination with space heater to maintain

winter interior temperature within operating limits required by engine-generator-set components and ATS.

7. Muffler Location: Within enclosure.
 8. Sound Attenuation: Maximum sound pressure level shall be 75 dbA, measured 23-feet from the enclosure in any direction.
- B. Engine Cooling Airflow through Enclosure: Maintain temperature rise of system components within required limits when unit operates at 110 percent of rated load for 2 hours with ambient temperature at top of range specified.
1. Louvers: Fixed, cooling-air inlet and discharge. Storm-proof and drainable louvers prevent entry of rain and snow.
- C. Load Center: 208Y/120-volt, 3-phase, 4-wire load center mounted inside enclosure, meeting the requirements of Division 16 Section "Panel Boards and Load Centers", and pre-wired to all electrical loads within the enclosure, including, but not limited to, the following.
1. Interior Lights with Switch: Factory-wired, vapor-proof-type fixtures within housing; arranged to illuminate controls and accessible interior.
 2. Convenience Outlets: Factory wired, GFCI.
 3. Battery Charger.
 4. Space Heaters.
 5. Immersion Heater.
 6. Pumps.

2.8 VIBRATION ISOLATION DEVICES

- A. Elastomeric Isolator Pads: Oil- and water-resistant elastomeric or natural rubber, arranged in single or multiple layers, molded with a nonslip pattern and galvanized-steel base plates of sufficient stiffness for uniform loading over pad area, and factory cut to sizes that match requirements of supported equipment.
- B. Restrained Spring Isolators: Freestanding, steel, open-spring isolators with seismic restraint.
1. Housing: Steel with resilient vertical-limit stops to prevent spring extension due to wind loads or if weight is removed; factory-drilled base plate bonded to 1/4-inch-thick, elastomeric isolator pad attached to base plate underside; and adjustable equipment mounting and leveling bolt that acts as blocking during installation.
 2. Outside Spring Diameter: Not less than 80 percent of compressed height of the spring at rated load.

3. Minimum Additional Travel: 50 percent of required deflection at rated load.
4. Lateral Stiffness: More than 80 percent of rated vertical stiffness.
5. Overload Capacity: Support 200 percent of rated load, fully compressed, without deformation or failure.

2.9 FINISHES

- A. Indoor and Outdoor Enclosures and Components: Manufacturer's standard finish over corrosion-resistant pretreatment and compatible primer.

2.10 SOURCE QUALITY CONTROL

- A. Prototype Testing: Factory test engine-generator set using same engine model, constructed of identical or equivalent components and equipped with identical or equivalent accessories.
 1. Tests: Comply with NFPA 110, Level 1 Energy Converters and with IEEE 115.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, equipment bases, and conditions, with Installer present, for compliance with requirements for installation and other conditions affecting packaged engine-generator performance.
- B. Examine roughing-in of piping systems and electrical connections. Verify actual locations of connections before packaged engine-generator installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with packaged engine-generator manufacturer's written installation and alignment instructions and with NFPA 110.
- B. Install packaged engine generator to provide access, without removing connections or accessories, for periodic maintenance.

- C. Electrical Wiring: Install electrical devices furnished by equipment manufacturers but not specified to be factory mounted.

3.3 CONNECTIONS

- A. Piping installation requirements are specified in Division 15 Sections. Drawings indicate general arrangement of piping and specialties.
- B. Connect fuel system piping to allow service and maintenance.
- C. Connect fuel piping to engine with a valve, union, flexible connector and fuel strainer.
 - 1. Natural gas piping, valves, and specialties for gas piping are specified in Division 15 Section "Fuel Gas Piping."
- D. Ground equipment according to Division 16 Section "Grounding and Bonding."
- E. Connect wiring according to Division 16 Section "Conductors and Cables."

3.4 IDENTIFICATION

- A. Identify system components according to Division 15 Section "Mechanical Identification" and Division 16 Section "Electrical Identification."

3.5 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections. Report results in writing.
- B. Perform tests and inspections and prepare test reports.
- C. Tests and Inspections:
 - 1. Perform tests recommended by manufacturer. Certify compliance with test parameters.
 - 2. NFPA 110 Acceptance Tests: Perform tests required by NFPA 110 that are additional to those specified here including, but not limited to, single-step full-load pickup test. Utilize a load bank to conduct the tests.
 - 3. Battery Tests: Equalize charging of battery cells according to manufacturer's written instructions. Record individual cell voltages.

- a. Measure charging voltage and voltages between available battery terminals for full-charging and float-charging conditions. Check electrolyte level and specific gravity under both conditions.
 - b. Test for contact integrity of all connectors. Perform an integrity load test and a capacity load test for the battery.
 - c. Verify acceptance of charge for each element of the battery after discharge.
 - d. Verify that measurements are within manufacturer's specifications.
- 4. Battery-Charger Tests: Verify specified rates of charge for both equalizing and float-charging conditions.
- 5. System Integrity Tests: Methodically verify proper installation, connection, and integrity of each element of engine-generator system before and during system operation. Check for air, exhaust, and fluid leaks.
- 6. Voltage and Frequency Transient Stability Tests: Use recording oscilloscope to measure voltage and frequency transients for 50 and 100 percent step-load increases and decreases, and verify that performance is as specified.
- 7. Harmonic-Content Tests: Measure harmonic content of output voltage fewer than 25 percent and at 100 percent of rated linear load. Verify that harmonic content is within specified limits.
- D. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
- E. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
- F. Coordinate tests with tests for transfer switches and run them concurrently.
- G. Test instruments shall have been calibrated within the last 12 months, traceable to standards of NIST, and adequate for making positive observation of test results. Make calibration records available for examination on request.
- H. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- I. Remove and replace malfunctioning units and retest.
- J. Retest: Correct deficiencies identified by tests and observations and retest until specified requirements are met.

- K. Report results of tests and inspections in writing. Record adjustable relay settings and measured insulation resistances, time delays, and other values and observations. Attach a label or tag to each tested component indicating satisfactory completion of tests.
- L. Simulation Test: After successful completion of the above tests, coordinate a simulation test with the user under typical load conditions. Manually disconnect utility power to the building at the ATS and allow the generator to automatically start and pick up the building load.

3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain packaged engine generators.

Section 4.1:

The work that is to be performed shall be scheduled during normal working hours (8:00 a.m. – 4:00 p.m.). The successful bidder should contact George Folse, Assistant Director, to arrange his/her schedule. He may be contacted at 504.364.2675 between the hours of 8:00 a.m. and 4:00 p.m., Monday through Friday.

Section 5.0 – Cleaning Area and Safety:

Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Inflammable material must be removed from the job site daily, because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare and safety of the general public, employees of Jefferson Parish, and other Parish officials.

There must be a fire watch present when any cutting, burning, or welding is taking place; and 2 hours thereafter. The fire watch and his equipment will be the sole responsibility of the contractor.

Section 6.0 – Warranty:

5 (five) Year Limited Extended Product Warranty

The 5 yr. extended warranty will begin upon the date the generator is received by Jefferson Parish.

The contractor must agree, upon written notice from the owner, promptly and without charge, and to the satisfaction of the owner, to make changes,

replacement, and corrections which may be required to make good all defects in materials and/or equipment under its intended use, within the warranty period.

The contractor will also guaranty that he will hold the Parish of Jefferson harmless from any damage arising from faulty workmanship or materials performed and/or installed within the duration of the warranty.

Section 7.0 – State Contractors License Requirements:

Not required.

Section 8.0 – Performance Bond:

A performance bond will be required, bidders must submit proof of currently having a bonding agency.

If the successful bidder does not provide a performance bond, the project may be awarded to the next or subsequent successful bidder.

Section 9.0 – Liquidated Damages:

Liquidated Damages in the amount of \$100.00 per day will be assessed for each day that expires 120 days from the date of the Notice to Proceed until work is substantially complete.

After substantial completion of the work, the contractor shall pay the owner \$100.00 for each day that expires after substantial completion, until work is complete and ready for final payment.

Section 10.0 – Cancellation Clause:

The Parish of Jefferson reserves the right to cancel the contract at anytime and for any reason by issuing a thirty (30) day written notice to the contractor.

Section 11.0 – Conference and Notice to Proceed:

A Conference shall be held between the successful contractor and the owner before any work commences; no work shall be performed until the contractor receives a written Notice to Proceed to begin work from the Department of General Services.